

Appendix B

Tributary Flow-Monitoring Sites Adjacent to the Lower Delaware River

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Assunpink Creek, NJ (not in 1999 sampling run)

Gage station is located on Warren Street bridge over Assunpink Creek, as it emerges from underground culvert. Park across one-way street, cross to downstream side. Gage mark is painted Y.

Calhoun Street Bridge, Delaware River (Fixed Site)

Park on PA side, unpaved small lot across street from guard shack. Sample 1/3, center, and 2/3 channel (see marks on bridge railings).

Gold Run, NJ (not in 1999 sampling run)

Gage station is located on bridge over 13th hole of the Trenton Country Club (the first footbridge downstream of the Lower Ferry Road Bridge over Gold Run). Park either in vacant lot on right side of Lower Ferry Road Bridge, or up next to the D&R Canal (respect privacy of property owner located adjacent to canal lot). Permission was obtained from Tom Tuttle, Superintendent of Trenton CC for use of the footbridge as our gage site. Gage is unmarked, so use 5th fitting from left side on upper rail, measuring from line on top of fitting of upper rail. Flow measurements were taken from US side of Lower Ferry Road Bridge over Gold Run (level entry to culvert just below boulders – use point where flow stabilizes and is no longer affected by the boulders). US side of bridge was located by GPS during Water Snapshot '98. Address of property owner: Thomas A. Tuttle, Golf Course Superintendent, Trenton Country Club, 201 Sullivan Way, West Trenton, NJ 08628.

Buck Creek, PA (Fixed Site)

Site is located at Main Street Bridge over Buck Creek, just below Lake Afton overflow. Park at pull-off of Coldspring Ave next to site. Gage is located on left side of Buck Creek Bridge support (under span). Use line above eroded concrete. Flow monitoring site is upstream of bridge approximately 30 yards. Area sometimes smells strongly of sewage discharge (unknown), so WEAR WADERS! This is an urban site.

Dyers Creek, PA (Bacteria Sampling Site)

Located at Route 32 (River Road) bridge over Dyer Creek, next to pump station above Yardley. There is a good walkway from which to sample, with parking on north side of bridge. Gage is marked on upstream side of bridge with chiseled Y painted orange. Flow monitoring site is located at the head of the upstream riffle above bridge.

Jacobs Creek, NJ (Fixed Site)

Owned by J. Foritano, located at driveway which exits Route 29N just past Jacobs Creek bridge (large stone house, old mill). Call before entering. Gage constructed at nail in tree on right bank at upstream end of Foritano property – use rod and levels to obtain gage height.

Houghs Creek, PA (Bacteria Sampling Site)

Gage is located off Taylorsville Road at Aqueduct Road, next to bridge crossing Houghs Creek. Permission was obtained to enter property. **DO NOT SAMPLE FROM TAYLORSVILLE ROAD BRIDGE – EXTREMELY DANGEROUS TRAFFIC!** Mark was chiseled and painted orange, located underneath bridge on left side. Flow measurement taken from site upstream of bridge, at downstream edge of rock overhang on right side.

Fiddler Creek, NJ (Bacteria Sampling Site)

On property of Mr. & Mrs. Goiten, 43 Fiddlers Creek Road, Titusville NJ. Gage established on small bridge entering property. Call before making site visit. Park at entrance to property off Fiddlers Creek Road, do not block drive. Fiddlers Creek Road is located off Route 29 just north of Washington Crossing Park (just past gas station).

Jericho Creek, PA (Bacteria Sampling Site)

Gage located off PA Route 32, on Stony Brook Road Bridge over Jericho Creek. The gage is marked by a chiseled Y on upstream side of bridge, 23'10" from right side of bridge. Measure from lower bevel edge to the water surface. Flow measurement was taken 9 feet downstream from DS side of bridge. Land use looks to be low density houses & agriculture, and a golf course located ½ mile upstream of sampling site. Sedimentation problems apparent.

Moore Creek, NJ (Bacteria Sampling Site)

Call property owner Mr. Pizzini, Iron Bridge Farm, 28 Pleasant Valley Road, Titusville, NJ, 08650. Permission has been received, but call as a courtesy! Route 29 North, right turn onto Pleasant Valley Road (just below prison work farm), Iron Bridge is located about ½ mile up Moore Creek. Park next to bridge (do not block driveway!). Gage is located on DS side of Iron Bridge, 20.2 feet from right edge (measure level at small hole in rail of bridge, from corner edge of bridge railing). Flow measurements taken approx. 30 yards DS of bridge, just below dead sycamore tree. Interesting geology at this site, displaying characteristic red-rock faces of Brunswick formation.

Pidcock Creek, PA (Bacteria Sampling Site)

Route 32 North, left into Bowmans Hill Wildflower Preserve, press button at metal gate, enter preserve and park at gate just below visitors center (do not block access). Gage is located on stone bridge just down the hill from visitors center. Inform director that we are sampling. See orange-marked Y on downstream side of bridge, above the main channel of flow at the middle culvert. Level reference is chiseled X at orange-painted stone located 28 feet downstream of bridge marker and 5 feet left of left edge of water. Reference mark is 11.725 feet lower than the bridge datum. Bridge datum location was located by GPS (filename R0526118). Flow measurements are taken in cross-section located at bench that sits 104 feet downstream of bridge along the Azalea Trail.

Lambertville-New Hope Bridge, Delaware River (Fixed Site)

Park in restaurant parking lot on NJ side, close to and behind guard shack. Sample 1/3, center, and 2/3 channel (see marks on bridge railings).

Lambertville Boat Launch, NJ (Bacteria Sampling Location)

Sampling site is located off of the boat launch. The Lambertville Boat Launch is approximately 0.1 miles upstream of the Lambertville Sewage Authority (SA) discharge. Directions: Turn off of Bridge Street (the street that crosses the bridge between Lambertville and New Hope) into the parking lot of the Lambertville Station. Go through the parking lot to the far left and after you hit the gravel road the boat access just upstream of the SA.

Aquetong Creek, PA (Fixed Site)

Site located on West Mechanic Street Bridge in New Hope, PA. Turn Left off Route 32 onto W Mechanics Street in New Hope, follow the road all the way up, and take the fork in the road to the Right. There is an area to park just over the bridge on the Right. The gage mark is a chiseled "Y" painted orange on the downstream side of the bridge approximately 11 feet from the right edge. Take the reading from the vertical bevel.

Swan Creek, NJ (Bacteria Sampling Site)

Site is located on the bridge at South Union Street, in Lambertville, NJ. Park in the supermarket parking lot (note collapsed retaining wall). The gage is marked on the upstream side of bridge with a chiseled “Y” painted orange. Read the gage height from the lower edge of the bevel on the vertical post.

Alexauken Creek, NJ (Bacteria Sampling Site)

Gage station is located on the Route 29 bridge over Alexauken Creek, just outside of Lambertville. The gage is marked with an orange painted “Y,” on the upstream side of the bridge, 5 ½ metal posts from the right edge (the mark is 28 feet from the South edge of the metal railing on the upstream side of the bridge). Read the gage height from the top edge of the bevel.

Stockton Bridge, Delaware River (Fixed Site)

Park in small area adjacent to guard shack (usually unoccupied). Sample 1/3, center, and 2/3 channel (see marks).

Wickecheoke Creek, NJ (Fixed Site)

Gage is on the Route 29 Bridge over Wickecheoke Creek just north of the old mill. Park at the Delaware & Raritan Canal State Park Office and walk to the Route 29 Bridge. The gage is marked on the downstream side of the bridge, over the left channel and just right of the center pier at the painted orange chiseled “Y.” Measure the gage from the edge of the top facing of the bridge.

Lokatong Creek, NJ (Fixed Site)

Site located on Rosemont-Raven Rock Road Bridge over Lokatong Creek. Directions: take Route 29 North and make a Right onto Federal Twist Road then make another Right onto Rosemont-Raven Rock Road. Park on the Left side of the metal bridge. The gage is marked by a notch in the paint on the downstream side of the bridge. The mark is to the right of the first vertical post on the right side of the bridge (24.5 feet from the right edge).

Bulls Island Area, NJ - Lumberville-Raven Rock Foot Bridge (Fixed Site)

Lumberville-Ravenrock footbridge – (Fixed Site) This is the footbridge that crosses the Delaware River from Bulls Island to Lumberville, PA. There will be two samples taken off of the bridge, one from each side. Sample marked locations at 1/3, center, and 2/3 of the distance across river.

Paunacussing Creek, PA (Fixed site)

The gage station is located on the Route 32 bridge over the Paunacussing Creek in Lumberville, PA. The mark is on the Right upstream wingwall on the top edge of the stone. It is close to the metal fence post on the upstream walkway. The mark is a chiseled “Y” painted orange. Take the reading from the top edge of the stone. Also it is easier to decipher the distance to the water level if someone makes the call from a lower vantage point. Note: bridge was removed and replaced in 2001 – re-establish gage in 2002.

Tohickon Creek, PA (Fixed site)

The site is located on the Route 32 bridge over the Tohickon Creek in Point Pleasant, PA. The gage mark is on the Right upstream side of the bridge, see the mark (a notch painted orange) on the sign post (sign says “Bucks County River Country/Tube Canoe Raft”). Measure the gage height from the top corner of the concrete wall near the mark.

Caines Run (AKA Warsaw Creek), NJ (Bacteria Sampling Site)

The gage is located on the upstream side of Route 29 Bridge near the middle of the headwall. A painted orange “Y” on the edge of the bridge marks the gage site. Use the bevel edge on the vertical side to take the gage height reading.

Tinicum Creek, PA (Fixed site)

The gage station is located off of Route 32N (PA). Make a Left onto Tinicum Creek Road, go past yellow house, then make a Left into the first driveway (private drive). Permission was obtained from landowner. Drive to the tributary creek, get out of the car and walk downstream to the confluence with Tinicum Creek. Use surveying equipment for gage height - use rod at Left side orange mark, then place rod at water level near the Right side orange mark, the difference is the water level change. The site was surveyed on June 9, 1999 to establish the gage. The staff gage will be set up in pool near orange mark on the Right side, but it is not in place yet (6/9/99). Note: staff gage was emplaced in 2001.

Cuttalossa Creek, PA (Bacteria Sampling Site)

The gage station is located on the Cuttalossa Road bridge over Cuttalossa Creek. Take Route 32N and make a Left just after the Cuttalossa Inn onto Cuttalossa Road. The gage is on the first bridge the road crosses and it is approximately 1/3 mile from the Inn. The gage mark is a chiseled “Y” painted orange located on the Left downstream wingwall approximately 4 feet from the edge.

Warford Creek, NJ (Bacteria Sampling Site)

The site is located on the Route 29 Bridge over Warford Creek, about 30 feet past sign that says “speed limit 50 mph, no stopping or standing, 1008-160/30.72” (just before mile marker 31). The gage station is set up on the upstream side of the bridge on top of the left wingwall, 2 feet from the headwall of the bridge. A painted orange “Y” on the edge of the bridge marks the gage. When taking the reading use the bevel edge on the vertical side.

Copper Creek, NJ (Bacteria Sampling Site)

The site is on the upstream side of the Route 29 bridge over Copper Creek which sits just south of the pipeline and north of the driveway to a yellow house. The gage mark is on the right wingwall approximately 1 ½ feet from the headwall.

Little Nishisakawick Creek, NJ (Bacteria Sampling Site)

Park in the lot for Blue Fish off of Route 29 to access this sampling site. The gage mark is on the downstream side of the Route 29 bridge over the Little Nishisakawick Creek, on the left side of the concrete culvert base approximately 2 feet from the downstream end.

Nishisakawick Creek, NJ (Fixed & NJDEP Site)

The gage height mark is located on the Route 12 bridge in Frenchtown on the upstream side (Route 12 is also called Kingwood Ave. at this location). The mark is on the left side of the bridge deck next to the fence post. Gage height will be taken from this location, but sampling will take place in the park adjacent to the creek.

Frenchtown Bridge, Delaware River (Fixed Site)

Park on NJ side in lot along dirt road. Sample 1/3, center, and 2/3 channel (see marks on railings).

Harihokake Creek, NJ (Bacteria Sampling Site)

Gage station is on the downstream side of the Route 29 bridge over the Harihokake Creek. Park in Liquor Store parking lot across the street. **WEAR ORANGE VESTS WHILE SAMPLING!** Gage mark is on the downstream side of the bridge on the left wingwall 1 ½ feet from the downstream headwall (also just above staff gage). Measure the gage height to the bevel on the vertical. Lastly, watch out for large population of water snakes.

Hakihokake Creek, NJ (Bacteria Sampling Site)

Gage station on the Bridge Street Bridge in Milford, NJ. The gage mark is on the upstream edge of the I-beam that supports the flower baskets on the fourth I-beam from the left edge of the railing, on the right edge of the I-beam and on the highest bevel. Note: Staff gage set up on left downstream wingwall (owner unknown).

Milford Bridge, Delaware River (Fixed Site)

Park on the Milford side of bridge, small lot next to bridge. Sample 1/3, center, and 2/3 channel (see marks on railings).

Gallows Run, PA (Fixed site)

This site is located at the intersection of Route 611 and Route 32. The site is located at the Route 611 bridge over Gallows Run. Park at Philip Andrews Country Furniture/Pottery. The gage mark is on the upstream side of the Route 611 bridge. **STAY ON SIDEWALK! WEAR ORANGE VESTS!** The gage mark is an orange chiseled “Y” located stream Right on the upstream side of the Route 611 bridge.

Cooks Creek, PA (Fixed site)

Located on the Red Bridge Road over Cooks Creek. Take Route 611 N, make a Left onto Route 212, and make a Right onto Red Bridge Road to the bridge. The gage mark is the orange chiseled “Y” on the downstream left side of the bridge. Measure the gage height from the lower (vertical edge) of the bevel. Note: Small side tributary just downstream of bridge was dry on June 15, 1999. Whenever sampling, note whether tributary is running or not.

Musconetcong River, NJ (Fixed site)

Sampling site is located on the Route 627 bridge over the Musconetcong River. Park just South of the bridge on the left side (small space by “Narrow Road” sign). The Gage mark is on the downstream side (see double yellow hash mark over the main channel). Measure the gage height from the chiseled “Y” with the orange spot.

Riegelsville Bridge, NJ/PA (Fixed site)

Sampling sites are located on the bridge, at 1/3, center, and 2/3 of the way across the bridge. Go North on River Road, then make a Left onto Route 627 and take 627 N to the bridge.

Fry's Run, PA (Fixed site)

Sampling site is located at the bridge over Fry’s Run at Northampton County Park, PA. Directions: Take Route 611 N to Northampton County Park. Pull into the parking lot. Sample from the old bridge located just upstream from the Route 611 bridge. Do not sample from the Route 611 bridge: too dangerous! The gage mark is on the upstream side of the old bridge at the orange spray paint mark on the lower surface, beside the stone post over main channel.

Pohatcong Creek, NJ (Fixed site)

Gage station is located on the River Road bridge over Pohatcong Creek. Directions: from the Riegelsville Bridge, continue North on River Road to the bridge over Pohatcong Creek. The gage mark is located on the upstream side of the bridge, on the fourth I-beam from the Left edge.

Wy-Hit-Tuk Access, PA (Bacteria Sampling Site)

Site is located off of Route 611. Directions: Take Route 611 N to Wy-Hit-Tuk Park. Pull off and park by the canal bridge gate. Cross the canal and there is a path to the Delaware River about 10 yards to the Right. Wade out into the river to take the sample. Note: Trail to site is steep, use care.

Lopatcong Creek, NJ (Fixed site)

This site is in an urban location. Directions: from Pohatcong Creek, continue North on River Road (pay attention to the bends) to Carpentersville Road, then make a Left onto High Street and then make another left towards Phillipsburg, NJ (Main Street). Park on the right side of the road by the Railroad Bridge Trestle. Walk back to the upstream side of the bridge over Lopatcong Creek. The gage mark is on the Left side of the creek at the chiseled “Y” painted orange near the wingwall. Measure the gage height from the top of the bevel in the concrete.

Lehigh River, PA (Fixed site)

Sampling site is located at the bridge over the Lehigh River in Easton. Sample near the McDonalds above the dam. DRBC can receive data from several agencies which sample the Lehigh. The Wildlands Conservancy will forward YSI HydroLab data from upstream locations, Parkland School District uses HydroLabs at two locations, the Lehigh University Earth Observatory lab operates a hydrolab at Bethlehem Boat Club, and the PADEP has fixed sites along the Lehigh. Wildlands Conservancy with the Army COE has been conducting studies of reservoir tailwaters, also with data available. Contact at Wildlands Conservancy: Chris Kocher. At Parkland School District: Bob Miller.

Easton Northampton Street Bridge, NJ/PA (Fixed site)

This site is located on the Easton Northampton Street bridge over the Delaware River. Directions: South Main Street (Phillipsburg, NJ) to the bridge. Park in the lot just short of the guard shack on the NJ side. Sample 1/3, center, and 2/3 of the distance across the bridge (see marks).

Bushkill Creek, PA (Fixed site)

The site is located on the Route 611 bridge over Bushkill Creek. Directions: follow Route 611 N, go under Route 22 and then Bushkill Creek is to the immediate right. It is tough to find parking at this location. The gage mark is an orange chiseled “Y” on the upstream side of the Route 611 bridge.

Eddyside Park, PA (Bacteria Sampling Site)

This site is a private beach. Directions: Take Route 611 N to Eddyside Park. Park in lot. Sample just upstream of the beach. If no entry is possible, use trail along the downstream fence of the park.

Mud Run, PA (Bacteria Sampling Site)

Just short of Sandt's Eddy Boat Access, where Route 611 is squeezed into single lane with light at either end of constriction, is the bridge which crosses over Mud Run. This trib was dry in 1999. Sample if creek is flowing.

Sandt's Eddy PA Fish Commission Access, PA (Bacteria Sampling Site)

Access is located off of Route 611. Directions: Take Route 611 N to the PA Fish Commission Access (on the right). Park in the lot and walk downstream to the fishing access area.

Martins Creek, PA (Fixed site)

Sampling site is on the Little Creek Road bridge over Martins Creek. Directions: Take Route 611 N, then make a Left onto Little Creek Road. The site is on the upstream side of the bridge. The gage mark is on the upstream side of the bridge, stream Left, marked by an orange chiseled "Y." Measure the gage height from the bevel on the vertical. Note: Interesting modifications to the stream channel.

Buckhorn Creek, NJ (Fixed site)

Site is located at the Hutchinson Road bridge over Buckhorn Creek. Directions: Take Route 519 N to Roxbury Station Road to Hutchinson Road. The sampling site is located on the Hutchinson Road bridge. The gage mark is an orange painted "Y" located in the center of the upstream side of the bridge.

Oughoughton Creek, PA (Bacteria Sampling Site)

Site is located on Depues Road bridge over Oughoughton Creek. Directions: Take Route 611N; where 611 makes a sharp Left go straight to the PPL Access. Then make a Right onto Foul Rift Road (PPL sign), and then make another Right onto Depues Road (PPL sign to access). Just past the left turn for the boat access is Oughoughton Creek bridge. The gage mark is on the downstream side of the bridge towards stream Left, and it is marked with a chiseled "Y" painted orange. If flowing take sample. The creek was dry at this location through 1999 (limestone stream, flows underground here).

PP&L Access @ Martins Creek plant, PA (Bacteria Sampling Site)

This site is across the street from the Oughoughton Creek sampling site. Directions: Make a Right into the fishing access area. (Make Right into lot just before the railroad tracks.) Take the sample at approximately three feet depth from the fishing access area.

Pophandusing Brook, NJ (Bacteria Sampling Site)

Site is located on the Spring Street bridge over the Pophandusing Brook in Belvidere, NJ. Directions: Once in Belvidere, take Greenwich Street to Fifth Street, and then make a Left onto Spring Street (a Dead End Road). This road crosses Pophandusing Brook. Park past the bridge and the house adjacent to the bridge on the Left hand side of the road. Walk back to the bridge to take the sample and the gage height reading. The gage mark is on the upstream side of the Spring Street bridge on the second vertical I-beam from the right wing wall. An orange spot marks the edge to be used for the gage height measurement. Measure from the left of the vertical I-beam.

Pequest River, NJ (Fixed Site)

Site is located at the Orchard Street bridge over the Pequest River, about 1 mile upstream from town. The gage mark on the Orchard Street bridge is on the downstream side on the third metal post from the Left side and it is denoted by an orange spot. Measure the gage height from the edge of the vertical post.

Belvidere Bridge, Delaware River (Fixed Site)

Site is located at the Belvidere-Riverton bridge over the Delaware River. Get rainfall data from the guard, then sample at 1/3, center, and 2/3 channel (see marks on railing).

Allegheny Creek, PA (Bacteria Sampling Site)

Site is located at the River Road bridge over Allegheny Creek. Directions: Foul Rift Road (toward the Belvidere Bridge), make the last Left before the bridge (sign reads "Portland 9 miles"). Then make a Right (uphill) onto River Road. Allegheny Creek is the second bridge. Park at the intersection with Shady Lane past the bridge. The gage mark is a chiseled "Y" painted orange, located in the middle of the upstream side of the bridge.

Driftstone Campground Access, PA (Bacteria Sampling Site)

Site at the Driftstone Campground is located at the boat launch. Directions: Go North on River Road. See campground on Right. Enter just after a sharp Right curve. Park in the grass to the Right of the boat ramp behind the office. Sample at this site at approximately three feet depth in the vicinity of the boat ramp.

Delawanna Creek, NJ (Fixed site)

Site is located on the Route 46 bridge over Delawanna Creek. Directions: (To get to Route 46 N take Route 620 out of Belvidere) Take Route 46 N and park at the end of the ACI Truck Stop (on the Right). Cross the road to the downstream side to take the sample and the gage height. The gage mark is in the center of the downstream side of the bridge with an orange chiseled "Y" denoting the location from which the gage height should be read.

Paulins Kill, NJ (Fixed & NJDEP site)

This site is located on the Route 46 N bridge over the Paulins Kill Creek. Directions: Take Route 46 N. Cross over the bridge over Paulins Kill Creek, just before the Route 94 N off ramp. Park in the Colombia Lake Wildlife Management Area Lot. Walk back to the bridge. The gage mark is located on the upstream side of the Route 46 N bridge next to the center pier and is denoted by an orange painted chiseled "Y." Also note the staff gage on the Left downstream wingwall.

Portland-Colombia Foot Bridge, NJ-PA (Fixed site)

This sampling site is on the Delaware River. Directions: Go North on River Road to Route 611. Go through the light and park on the Right past the depot. Take two samples at this site, one 1/3 of the distance across the bridge and another 2/3 of the way across. Use the bridge samplers to retrieve the samples.

Jacoby Creek, PA (Bacteria Sampling Site)

This site is located on the Route 611 bridge over Jacoby Creek. Directions: Take Route 611 N to the small bridge just past the off ramp for the toll bridge. (See the Service Star on the Right and the Portland Diner on the Right just past the bridge). The gage mark is on the upstream side, in the center of the bridge and it is designated by an orange chiseled "Y." Measure the gage height from the vertical at the bevel.

Slateford Creek, PA (Bacteria Sampling Site)

Site is located at the NPS (National Parks Service) Boundary on the National Park Road bridge over Slateford Creek. Directions: Route 611 N to National Park Road. Park just short of the bridge. The gage mark is a blue "Y" at center of the upstream span. To take a sample at this site, walk down to the creek via the lower end of the bridge.

Dunnfield Creek, NJ (Fixed & NJDEP site)

Site is located on the Appalachian Trail foot bridge at parking lot across from the NPS Information Center. Directions: From the visitor center, cross under Interstate-80, turn left toward the westbound ramp and pull into the hiker parking lot. Sample from the footbridge. The gage mark is on the downstream side of the footbridge (see nail). Measure the gage height from the nail head.